TB(1A) Ch. 7 Symmetry and Transformation

Conventional Questions

1. **[13-14 Standardized Test 2 Q3]**

    In **Figure 2**, draw the image obtained if the hexagon is reflected along *XY*.   **(2 marks)**
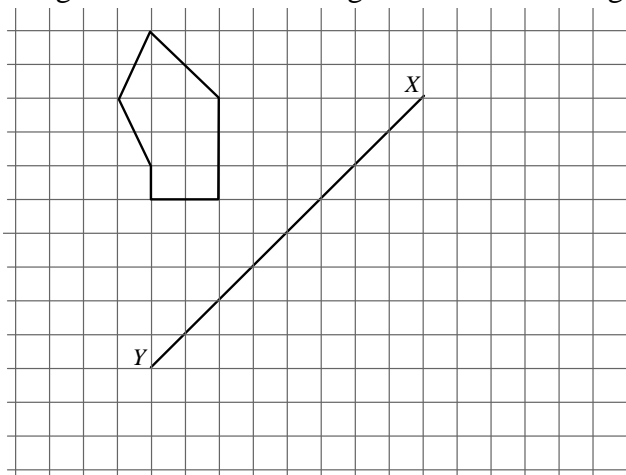

Figure 2

2. **[13-14 Final Exam Q1]**

    In **Figure 1**, shade the least number of squares to construct a figure of 2-fold rotational symmetry with "×" as the centre of the rotation.   **(2 marks)**
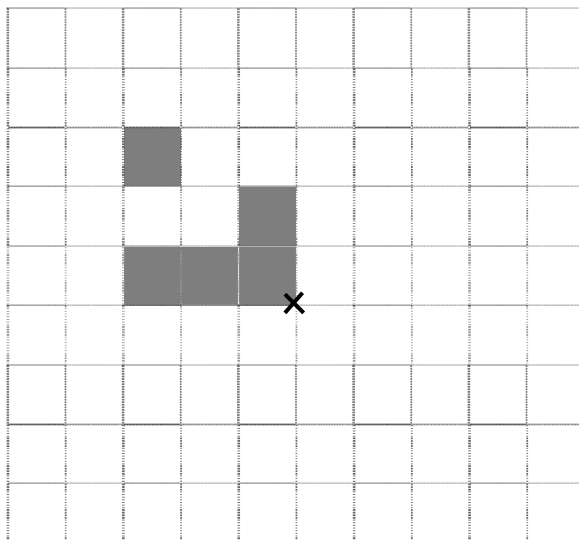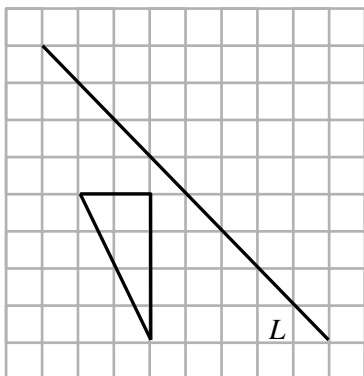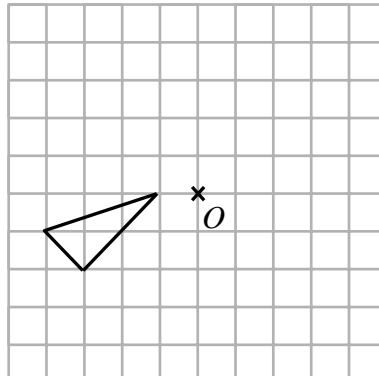

Figure 1

3. **[14-15 Standardized Test Q2]**

(a) Draw then image of the triangle after it is reflected about the line *L*.   **(1 mark)**

(b) Draw then image of the triangle after it is rotated anti-clockwise about *O* through 270°.   **(1 mark)**

4. **[15-16 Standardized Test Q2]**

(a) Draw the image on the following grid after **Figure 2** is enlarged by a scale factor of 2.

   (1 mark)

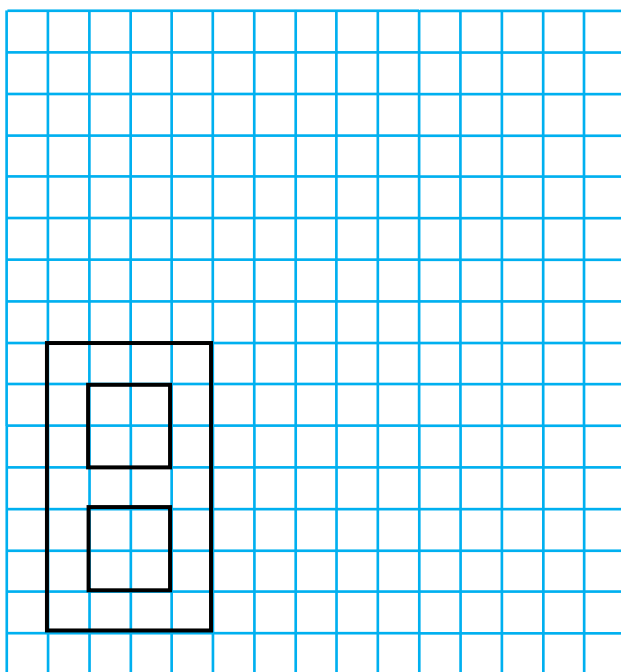**Figure 2**

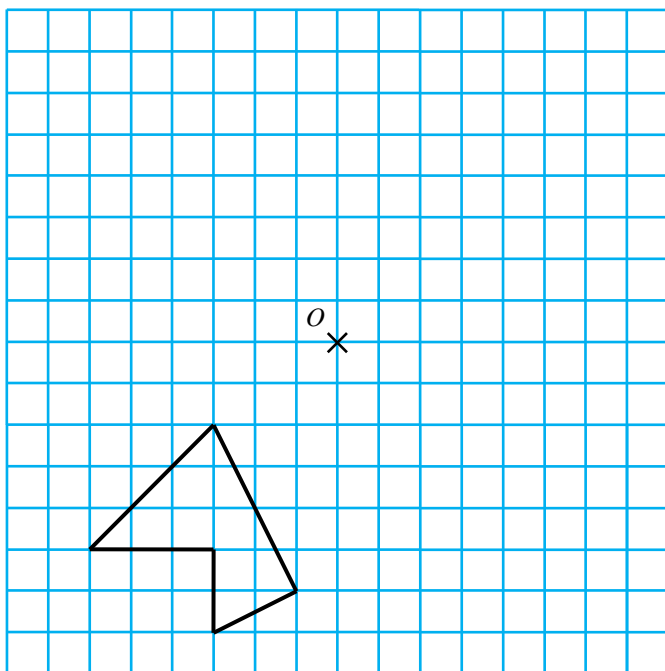(b) Draw the image on the following grid after **Figure 3** is rotated clockwise about *O* through 180°.   **(2 marks)**

Figure 3

5. **[15-16 Final Exam Q12a]**

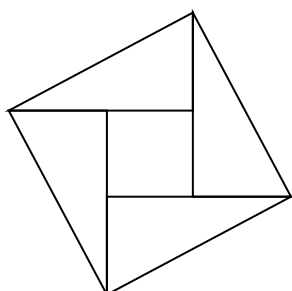   **Figure 7(a)** is formed by four identical right-angled triangles.

Figure 7(a)

(a) Write down the number of axes of reflectional symmetry and the order of rotational symmetry of **Figure 7(a)** in the table below. **(1 mark)**

Number of axes of reflectional symmetry	
Order of rotational symmetry	

6. **[16-17 Standardized Test Q6]**

The two figures below are each formed by 25 identical squares.
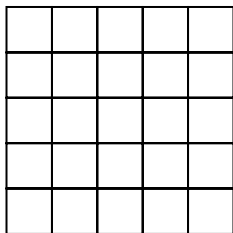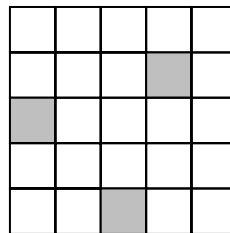

Figure 2(a)

Figure 2(b)

(a)   Shade 7 squares in **Figure 2(a)** to construct a figure with 2 axes of symmetry.

(1 mark)

(b)   Shade 5 more squares in **Figure 2(b)** to construct a figure with 4 axes of symmetry and 4-fold rotational symmetry. **(2 marks)**

7. **[16-17 Final Exam Q6]**

(a) **Figure 1(a)** shows $\triangle ABC$ and line L. Reflect $\triangle ABC$ along L and then translate it 3 units to the right. Draw the final image in **Figure 1(a)**. **(1 mark)**

(b) In **Figure 1(b)**, draw the image when the quadrilateral X is reduced by a scale factor of $\frac{1}{3}$.
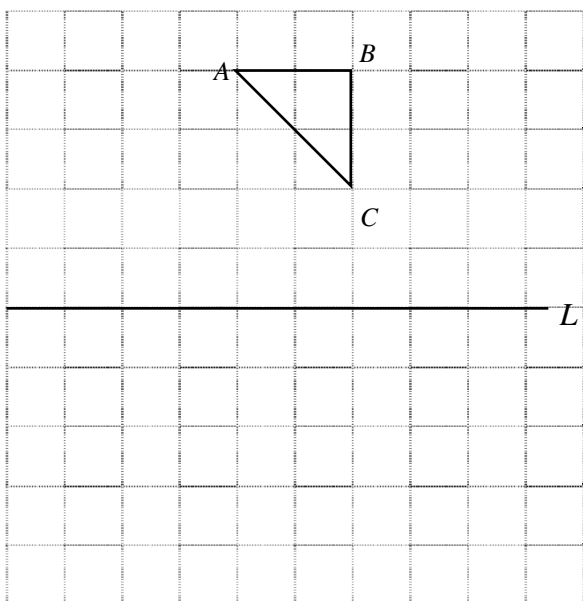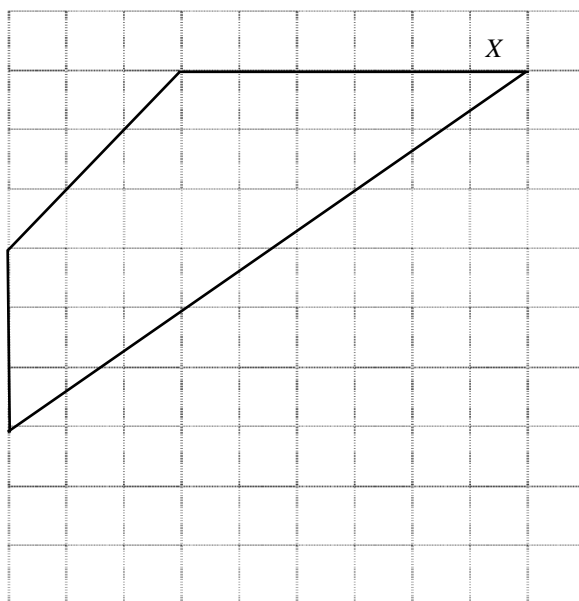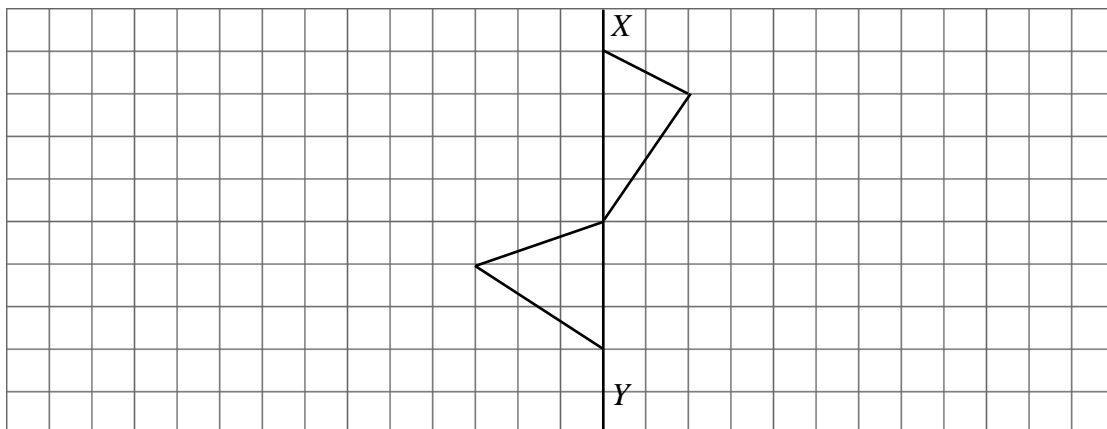
(1 mark)

Figure 1(a)

Figure 1(b)

(c) Draw the image of the figure if it is reflected about *XY*.   **(2 marks)**

8.   **[17-18 Final Exam Q5]**

In **Figure 2**, draw the final image of the quadrilateral if it is rotated through 90° anticlockwise about *O* and then translated 3 units downwards.   **(2 marks)**
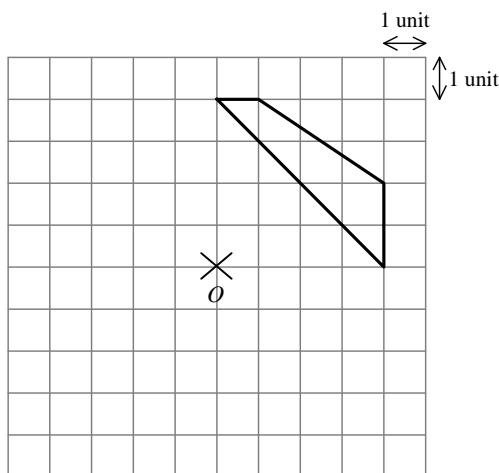

Figure 2

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